

Notice of Allowability

Application No.

10/501,706

Examiner

Minh D. A

Applicant(s)

FUKUMOTO ET AL.

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 7/16/04.
2. ☒ The allowed claim(s) is/are 1-9.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date 7/16/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


SHI-CHAO CHEN
PRIMARY EXAMINER

Allowable Subject Matter

1. Claims 1-9 are allowed.

The following is an examiner's statement of reasons for allowance:

Prior art does not teach that, a triangular wave signal generation circuit for generating a triangular wave signal; a slow-start circuit for generating a slow-start signal that rises slowly during a startup of said load; a PWM control signal generation circuit for generating a PWM control signal, said PWM control signal generation circuit adapted to receive said triangular wave signal, current detection signal, voltage detection signal, and slow-start signal; generate an error signal based on said current detection signal and voltage detection signal in combination with all limitations recited in independent claim 1.

Prior art does not teach that, a slow-start block connected to an external startup capacitor, for generating a slow/start signal that rises slowly during a startup of said load; and a PWM control signal generation circuit for generating a PWM control signal, said PWM control signal generation circuit adapted to receive said triangular wave signal, current detection signal generated by detecting the current flowing through the load, voltage detection signal generated by detecting the voltage impressed on the load, and slow-start signal; generate an error signal based on said current detection signal and voltage detection signal; automatically select either one of said error signal and said slow start signal based on the magnitudes of said signals; and compare the selected signal with said triangular wave signal to generate said PWM control signal, and wherein said semiconductor switch circuit is switched on and

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off based on the PWM control signal in combination with all limitations recited in independent claim 6.

The remaining dependent claims 2-5, 7-9 are allowable for at least above reason.

Prior art made of record and not relied upon is considered pertinent to applicant's disclosure. None of record prior arts stands alone or combination with the others discloses all limitations required in claim invention.

Citation of relevant prior art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Prior art Kouno et al (U.S. Patent No. 6,275,325) discloses an inverter and method for driving a plurality of cold cathode tubes in parallel.

Prior art Okazako et al (U.S. Patent No. 5,539,303) discloses a method for monitoring atmospheric pressure glow discharge plasma using current pulse count.

Prior art Deng et al (U.S. Patent No. 6,008,589) discloses a single –switch, high power factor AC-to-AC power converters.

Prior art Sase et al (U.S. Patent No. 6,377,480) discloses a soft start circuit for switching power supply.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh Dieu A whose telephone number is (571) 272-1817. The examiner can normally be reached on M-F (5:30 AM-2:45 PM).

If attempts to reach the examiner by telephone are unsuccessful, the

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examiner's supervisor, Owens Douglas W can be reached on (571) 272-1662. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Examiner

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2/11/07

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